GOLOVAN, A.T.

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Subject	:	USSR/Electricity
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Authors	:	Chilikin, M. G., Dr. of Tech. Sci., Prof., Golovan, A. T., Dr. of Tech. Sci., Prof., and Petrov, I. I., Kand. of Tech. Sci., Dotsent
Title	:	Scientific and technical problems of the electric drive
Periodical	:	Elektrichestvo, 7, 29-36, Jl 1955
Abstract	:	The authors present a historical review of the development of the electric drive in Tsarist Russia and in the Soviet Union. In the second part of the article, they present the basic scientific and technical problems of the modern automatized drive. Among these problems are: frequency control of an a-c drive obtained through static and rotating frequency changers; further improvement of d-c drives, based on the use of closed circuits and feedbacks and use of various types of amplifiers;

Golovan, A. T.

KULEBAKIN,V.S.; ALEKSEYEV,A.Ye.,; LARIONOV,A.N.; BOGORODITSKIY,N.P.;
CHILIKIN,M.G.; VASIL'YEV,D.V.; ODINTSOV,G.V.; PETROV,I.I.;
FATEYEV,A.V.; GOLOVAN,A.T.; MOROZOV,D.P.; BASHARIN,A.V.

S.A.Rinkevich. Elektrichestvo no.9:85 S'55. (MLRA 8:11)
(Rinkevich, Sergei Aleksandrovich, 1886-1955)

FILIN, N.M.; TULIN, V.S.; CHULIKIN, M.G.; GOLOVAN, A.T.; PETROV, I.I.;
MOROZOV, D.P.; VESHENEVSKIY, S.N.

Engineer N.A.Tishchenko. Elektrichestvo no.3:89 Mr '56.
(Tishchenko, Nikolai Afanas'evich, 1906-) (MIRA 9:6)

[redacted] GOLOVAN, A.T.

ALEKSANDROV, A.G., dots; ARONOVICH, I.S., inzh.; BABIKOV, M.A., doktor tekhn.nauk; BATUSOV, S.V., kand.tekhn.nauk; BEL'KIND, L.D., doktor tekhn.nauk; VENIKOV, V.A., doktor tekhn.nauk; VESELOVSKIY, O.N., kand.tekhn.nauk; GOLOVAN, A.T., doktor tekhn.nauk; GOLUBTSOVA, V.A., doktor tekhn.nauk; GREYNER, L.K., inzh.; GRUDINSKIY, P.G., prof.; GUSEV, S.A., inzh.; DMOKHOVSKAYA, L.F., kand.tekhn.nauk; DROZDOV, N.G., doktor tekhn.nauk; IVANOV, A.P., doktor tekhn.nauk [deceased]; KAGANOV, I.L., doktor tekhn.nauk; KERBER, L.L., inzh.; KOCHENOVA, A.I., kand.tekhn.nauk.; LARIONOV, A.N.; MINOV, D.K., doktor tekhn.nauk; NETUSHIL, A.V., doktor tekhn.nauk; NIKULIN, N.V., kand.tekhn.nauk; NILENDER, R.A., prof.; PANTYUSHIN, V.S., prof.; PASYNKOV, V.V., doktor tekhn.nauk; PETROV, G.N., doktor tekhn.nauk; POLIVANOV, K.M., doktor tekhn.nauk; PRIVEZENTSEV, V.A., doktor tekhn.nauk; RADUNSKIY, L.D., inzh.; RENNE, V.T., doktor tekhn.nauk; SVENCHANSKIY, A D., doktor tekhn.nauk; SOLOV'YEV, I.I., doktor tekhn.nauk; STUPEL' F.A. kand.tekhn.nauk; TALITSKIY, A.V., prof.; TEMNIKOV, F.Ye., kand.tekhn. nauk; FEDOROV, L.I., inzh.; FEDOSEYEV, A.M., doktor tekhn.nauk; KHOLYAVSKIY, G.B., inzh.; CHECHET, Yu.S., doktor tekhn.nauk; SHNEYBERG, Ya.A., kand.tekhn.nauk; SHUMILOVSKIY, N.N., doktor tekhn.nauk; ANTIK, I.B., red.; MEDVEDEV, L.Ya., tekhn.red.

[The history of power engineering in the U.S.S.R. in three volumes] Istoriia energeticheskoi tekhniki SSSR v trekh tomakh. Moskva, Gos. energ. izd-vo.

(Continued on next card)

ALEKSANDROV, A.G.---(continued) Card 2.

Vol.2. [Electric engineering] Elektrotekhnika. Avtorskii kollektiv toma: Aleksandrov i dr. 1957. 727 p. (MIRA 11:2)

1. Moscow. Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Larionov)
(Electric engineering)

GOLOVAN, A T

CHILIKIN, M.G.;MESHKOV, V.V.;YEFREMOV, I.S.;GOLOVAN, A.T.;SVENCHANSKIY, A.D.

Professor D. K. Monov; on his 60th birthday and 35th anniversary in scientific, pedagogical, and engineering activity. Elektrichestvo no.3:95 Mr '57. (MIRA 10:4)
(Minov, Dmitrii Konstantinovich, 1896-)

KULEBAKIN, V.S.; LARIONOV, A.N.; CHILIKIN, M.G.; GOLOVAN, A.T.;
MOROZOV, D.P.; KURBATOVA, N.S.; KORITSKIY, A.V.; VESHENEVSKIY,
S.N.; TISHCHENKO, N.A.; TULIN, V.S.

Doctor of Technical Sciences I.I. Petrov. Elektrichestvo no.12:
83 D '57. (MIRA 10:12)
(Petrov, Ivan Ivanovich, 1907-)

TOLOKONNIKOV, Leonid Stepanovich; SOKOLOV, Mikhail Mikhaylovich; SANDLER, Abram Solemonovich; KLYUCHEV, Vladimir Ivanovich; IVANOV, Yevgeniy Petrovich; ZIMIN, Yevgeniy Nikolayevich; CHILIKIN, M.G., glavnyy red.; GOLOVAN, A.T., red.; SAPAROVA, A.L., red.; BORUNOV, N.I., tekhn.red.

[Atlas of electromechanical industrial units] Atlas elektromekhanicheskikh promyshlennykh ustanovok. Pt.1 [Electric drives and transmission] Elektroprivod i peredatochnye mekhanizmy. Red. M.G.Chilikin. Moskva, Gos. energ. izd-vo. 1958. 139 p.
(Electric driving) (Gearing) (MIRA 12:2)

PHASE I BOOK EXPLOITATION SOV/3881

Golovan, Andrey Trifonovich

Osnovy elektroprivoda (Fundamentals of Electric Drives) Moscow, Gosenergoizdat, 1959. 343 p. Errata slip inserted. 40,000 copies printed.

Ed.: A.P. Kuvayeva; Tech. Ed.: K.P. Voronin.

PURPOSE: This textbook is recommended by the Ministry of Higher Education of the USSR for students following the course "Fundamentals of Electric Drives" at Power Engineering Schools of Higher Education and certain Polytechnical Schools of Higher Education. It may also be of use to persons designing or operating electric drives.

COVERAGE: The textbook describes methods of analyzing electric drive operation under steady and transient conditions and with various loads, and examines various types of motor characteristics for natural and special circuit diagrams. There is a study and evaluation of the adjustable properties of various

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types of electric drives. The book describes methods of calculating the operating conditions of electric drives, and the power required by electric motors, and by starting, braking, and adjustable resistors. No personalities are mentioned. There are 57 references: 54 Soviet, 2 German, and 1 English.

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1. Electric drive and its principal parts 7
2. Types of electric drives and the shape of motions accomplished by them 7
3. Brief outline of the development of electric drives in the USSR 13
4. Purpose and contents of the course 24

LYCHKOVSKIY, Vladimir L'vovich, prof.; GOLOVAN, A.T., prof., retsenzent;
NECHAYEV, V.V., inzh., red.; KAN, P.M., red.izd-va; YERMAKOVA,
T.T., tekhn.red.

[Electric equipment and electric propulsion of ships] Elektricheskoe oborudovanie i elektrodvizhenie sudov. Moskva, Izd-vo "Rechnoi transport," 1960. 406 p. (MIRA 13:12)
(Electricity on ships) (Ship propulsion, Electric)

GOLOVAN, A.T., doktor tekhn.nauk, prof. (Moskva); KRUGLYANSKIY, I.M., inzh. (Moskva)

Circuits for the excitation of asynchronous variable-frequency generators. Elektrichestvo no.5:31-36 My '60. (MIRA 13:9)

(Electric generators)

GOLOVAN, A.T., prof., doktor tekhn.nauk; YUY YAN' [Yu Yen], inzh.

Effect of transient currents at the starting of asynchronous motors on the starting losses. Elektrichestvo no. 12:58-61 D '60.
(MIRA 14:1)

1. Moskovskiy energeticheskiy institut.
(Electric motors, Induction)

KUVAYEVA, Antonina Petrovna, dots.; GOLOVAN, A.T., prof., red.

[Collection of course work calculation problems for a course on the principles of electric drives] Sbornik zadanii na kursovye raschetnye raboty po kursu osnovy elektroprivoda. Red. A.T.Golovan. Moskva, Mosk. energ. in-t, 1961. 122 p. (MIRA 16:10)

(Electric driving)

GLAGOLEV, Georgiy Il'ich; GOLOVAN, A.T., doktor tekhn.nauk, prof., retsenzent; KHARIZAMENOV, I.V., doktor tekhn.nauk, prof., retsenzent; SUD, I.I., red.; SUSHKIN, I.M., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Electrical equipment of press and forging shops] Elektrooborudovanie kuznechno-pressovykh tsekhov. Moskva, Metallurgizdat, 1962. 311 p. (MIRA 15:7)

(Forging) (Electric driving)

BACHURIN, N.I., inzh.; VOLKOV, S.S., inzh.; GORODETSKIY, S.S., prof., doktor tekhn. nauk; GUSEV, S.A., dotsent, kand. tekhn. nauk; ZHUKHOVITSKIY, B.Ya., dots., kand. tekhn. nauk; IVANOV-SMOLENSKIY, A.V., dots., kand. tekhn. nauk; KIFER, I.I., dots., kand. tekhn.nauk; KORYTIN, A.A., starshiy prepodavatel'; KULIKOV, F.V., dots.; NIKULIN, N.V., dots., kand. tekhn. nauk; PODMAR'KOV, A.N., dots.; PRIVEZENTSEV, V.A., prof., doktor tekhn. nauk; RUMSHINSKIY, L.A., dots., kand. fiz.-mat. nauk; SOKOLEV, V.D., dots., kand. tekhn.nauk; URLAPOVA, M.N., inzh.; TIKHOMIROV, P.M., dots., kand. tekhn. nauk; FEDOROV, A.A., dots., kand. tekhn. nauk; CHUNIKHIN, A.A., dots., kand. tekhn. nauk; CHILIKIN, M.G., prof., glav. red.; GOLOVAN, A.T., prof., red.; GRUDINSKIY, P.G., prof., red.; PETROV, G.N., prof., doktor tekhn. nauk, red.; FEDOSEYEV, A.M., prof., red.; ANTIK, I.V., inzh., red.; BORUNOV, N.I., tekhn. red.

[Electrical engineering handbook]Elektrotekhnicheskii spravochnik. 3., perer. i dop. izd. Pod obshchei red. A.T. Golovana i dr. Moskva, Gosenergoizdat. Vol.1. 1962. 732 p. (MIRA 15:10)

1. Moskovskiy energeticheskiy institut (for Golovan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Antik).
(Electric engineering--Handbooks, manuals, etc.)

GOLOVAN, A.T., doktor tekhn.nauk, prof.; CHZHAN CHAN-SHEN [Chang Ch'ang-sheng]

Mechanical rocking of a synchronous machine during its operation with series connected condensers. Elektrichestvo no.10:32-36 O '62. (MIRA 15:12)

1. Moskovskiy energeticheskiy institut.
(Electric machinery, Synchronous)

CHILIKIN, M.G.; TSELIKOV, A.I.; GOLOVAN, A.T.; PETROV, I.I.; BYCHKOV, V.P.; SOKOLOV, M.M.; DRUZHININ, N.N.; VESHENEVSKIY, S.N.; KHALIZEV, G.P.; TISHCHENKO, N.A.

D.P.Morozov; obituary. Elektrichestvo no.5:93 My '63.
(MIRA 16:7)

(Morozov, Dmitrii Petrovich,)

ALEKSEYEVA, G.Ye., kand. tekhn. nauk, dots.; MELESHKINA, L.P., dots., kand. tekhn. nauk; BALUYEV, V.K., inzh.; BAMDAS, A.M., prof., doktor tekhn. nauk; VENIKOV, V.A., prof., doktor tekhn. nauk; YEZHKOV, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GORFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.F., dots., kand. tekhn.nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIN, P.G., inzh.; NEKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIG, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKIN, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red. GOLOVAN, A.T., prof., red.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

ALEKSEYEVA, G.Ye.—— (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva, Energiia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. [illegible] Energeticheskiy institut. 2. Moskovskiy energeticheskiy institut (for Golovan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent AN SSR (for Petrov).

GOLOVAN, A.T., doktor tekhn. nauk, prof. [deceased]; GOPAL RAJESH SHEKAR, inzh.

Effect of free currents on losses in the braking of squirrel-cage induction motors by countercurrents. Elektrichestvo no.1:56-57 Ja '65. (MIRA 18:7)

1. Moskovskiy energeticheskiy institut.

FEDOTOV, V.A.; GOLOVAN', A.Ya.

Beveling sheet glass with diamond disks. Stek. i ker. 19 no.2:
18-19 F '62. (MIRA 15:3)
(Glass cutting) (Diamonds, Industrial)

GOLOVAN', E.T.; LUK, A.N.; STARINETS, V.S.

Modelling some properties of memory. Priroda 54 no.9:45-50 S '65.
(MIRA 18:9)

1. Institut kibernetiki AN UkrSSR, Kiyev.

L [illegible] EWT(d)/EWP(1) IJP(c) BB/GG
ACC NR: [illegible] SOURCE CODE: UR/0026/65/000/009/0045/0050

AUTHOR: Golovan', E. T.; Luk, A. N.; Starinets, V. S.

64

ORG: Institute of Cybernetics AN UkrSSR, Kiev (Institut kibernetiki AN UkrSSR)

TITLE: Simulation of some properties of memory 16,44

SOURCE: Priroda, no. 9, 1965, 45-50

TOPIC TAGS: bionics, simulation, computer memory, physiology, cybernetics

ABSTRACT: The authors consider the various physiological aspects of random access to information in the human memory. The associative basis of human memory is discussed and two basic properties of the associative process are singled out: the limited number of associative bonds for each idea (9-10), and the small number of transitions (usually less than 6) which make up the indirect associative bond between any two ideas. These two properties are used as a basis for constructing models of the human memory. An associative network is proposed in which six steps at most are necessary for transition from one point to another (see figure). One of the main disadvantages of this model is that is fails in conversion of indirect to

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ACC NR: AP5025246

direct association. This phenomenon is a property of human memory. If the direct associative bonds between ideas A and B and between ideas B and C are activated often enough, a direct bond will be formed between ideas A and C. This bond cannot be formed in the proposed associative network. The proposed model requires additional closed connection to transform it into an adequate analog of associative memory. A second model is proposed in which the hierarchical organization of associative memory is represented by a set of tables. These tables are located on various levels with three tables on each level; the first gives the relationship between words in the associa-

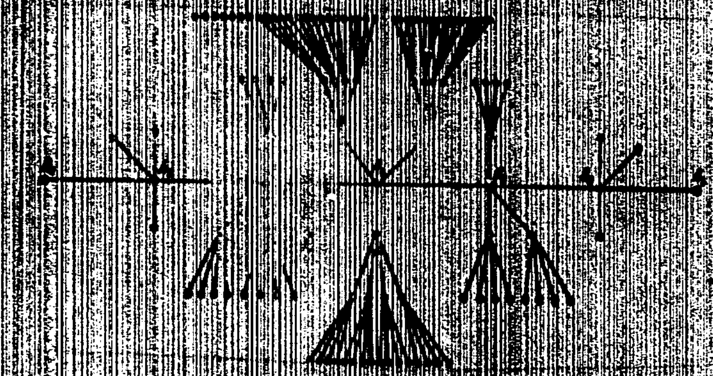

Fig. 1.

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ACC NR: AP5025346

[illegible] memory; the second gives the coincidence of these words and the third gives the relationship between the words and an emotional index. The tabular model reflects the experimentally [illegible] property of unidirectionality in associative memory. As an example, in word association tests a common response to the word "cup" is "water". However, the response to the word "water" is seldom "cup". This model also accounts for the [illegible] from indirect to direct associations. Bonds are [illegible] and new bonds are formed when the coefficients of coincidence in the second table rise or fall below a given value. Recommendations are made for checking these models on electronic computers. Orig. art. has: 2 figures.

SUB CODE: 09,05/ SUBM DATE: [illegible] ORIG REF: 000/ OTH REF: 000

Card 3/3

GOLOVAN', Emiliy Timofeyevich[Holovan',E.T.]; STARINETS, Valeriy
Sergeyevich [Starynets', V.S.]; IVANOV-MUROMSKIY, Kirill
Aleksandrovich; MOTRUK, R.I., red.

[Machine penetrates into the mysteries of the brain; modeling of emotions] Mashyna pronikaie v taiemnytsi mozku; modeliuvannia emotsii. Kyiv, Naukova dumka, 1965. 127 p.
(MIRA 19:1)

L 34402-66 EWT(d)/T/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6009448 SOURCE CODE: UR/0000/65/000/000/0179/0184 17

AUTHOR: Amosov, N. M.; Golovan', E. T.; Zaslavskiy, S. Ya.; Starinets, V. S. B+1

ORG: None

TITLE: Simulating the human mind

SOURCE: AN SSSR. Nauchnyy sovet po kompleksnoy probleme Kibernetika. Bionika (Bionics). Moscow, Izd-vo Nauka, 1965, 179-184 16C

TOPIC TAGS: cybernetics, psychology, computer memory, bionics, computer emulation

ABSTRACT: The authors present a model for generating and analyzing phrases with respect to certain characteristics of the emotional sphere and the organization of human memory. A series of problems is encountered in the functioning of the model. These problems are similar to the behavior of an automaton in random enviroments. A schematic is given for the layout and components of this model (Fig. 1). The model consists of 7 separate units. These units are: the input unit, the interaction unit, the emotion unit, the response unit, the analysis unit, temporary memory unit and the permanent memory unit. The model has two initial states at any fixed moment in time. The first initial state is characterized by permanent memory content and the second by the intermediate state of all the units. Two programs are used in the proposed model: the rational which is com-

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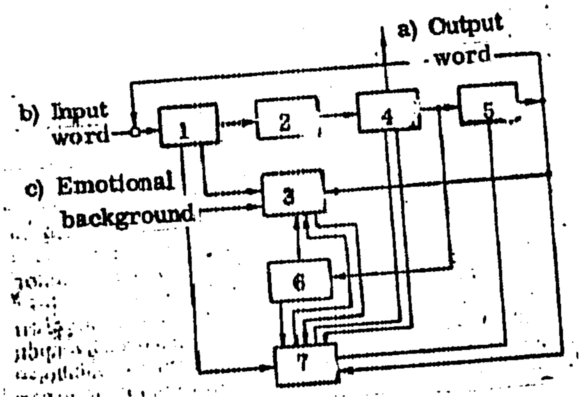

Figure 1. Block Diagram of the Model U_{in}-1-input unit; U_{int}-2-interaction unit; U_e-3-emotion unit; U_r-4-response unit; Ua-5-analysis unit; U_{tem}-6-temporary memory; U_{perm}-7-permanent memory

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ACC NR: AT6009448

posed of rules of logic: the emotional which reflects the organic and social needs of a human being. The function of the model is given for the case where certain emotions are assigned to the elements of the input word and a certain emotional state was assigned to the entire word before introducing it into the model. When the model completes a certain number of cycles, the indicated operations can be realized by the last phase independently by using a determined volume of data stored in the permanent memory. This study is the first step in simulating thinking functions for given situations. Orig. art. has: 2 figures.

SUB CODE: 06, 09 05/ SUBM DATE: 26Oct65 / ORIG REF: 002 / OTH REF: 002

Card 3/3 BLG

ACC NR: AP6016845 SOURCE CODE: UR/0026/66/000/005/0040/0047

AUTHOR: Ivanov-Muromskiy, K. A.; Golovan', E. T.; Starinets, V. S.

ORG: none

TITLE: At the junction of cybernetics and psychology

SOURCE: Priroda, no. 5, 1966, 40-47

TOPIC TAGS: brain, cybernetics, electronic computer

ABSTRACT:

The simulation of human behavior is a new branch of study which has developed at the junction of cybernetics and psychology. Simulation of the functioning of human and animal brains can lead to improvement in electronic computers and to a deeper understanding of psychic activity. The reflections of an objective reality in a brain and in an automat can be studied as a simulation process, although the reflections are qualitatively different.

The basis for the normal existence of a living organism is its equilibration, i.e., its active accommodation to surrounding conditions. I. P. Pavlov formulated this as follows: "The magnificent complexity of the higher as well as the lower organisms holds only as long as the compound is precisely bounded and equilibrated internally and with the surrounding conditions." Thus, one should distinguish between internal equilibrium, which is intended to preserve homeo-

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stasis—the stability of the internal environment of an organism—and external equilibrium, which governs the selection of an optimum behavior. These are constantly flowing processes, the equilibrium being disrupted and reinstated over and over again.

Simulation in a living organism is an expression of the reflection of the overall feature of matter. The reflection process involves an interdependence between two material processes in which the special features of the first process are reproduced in corresponding features of the other. However, a simulation process in an organism is achieved not by means of passive reflection, but through a directed-search activity, i. e., through active selection of information. The selection of information for the construction of the necessary strategy and tactics of behavior makes it possible to act "intelligently." The simulating character of reflection activity in the course of sensory perception has been proved experimentally by psychologists and physiologists. Cybernetics, according to V. M. Glushkov, considers the human brain as a universal instrument of "dynamic information simulation." Simulation is based on the formal resemblance of a known analogy between qualitatively different processes. Therefore, generally speaking, a model can be defined as a system having a similarity to another system within the limits of one or several information codes.

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The most essential features (invariants), which are always present in the simulated object, must be reflected in the model. At the present time there is no doubt that, in principle, any form of human thinking can be simulated in an information plane by means of cybernetic systems.

Some Principles of Brain Activity

The operation of the brain as a simulating device is based on the following principles:

1) Succession. The formation of models results from the "processing" of the information, i.e., recoding it from a lower to a higher code. In speech simulation, the succession of codes will be : code of sounds, code of words, code of sentences, code of meanings.

2) "Active" isomorphism. The formation of a model proceeds according to the laws of isomorphic representation. A model is an ideal form characteristic for reflection processes in human beings and animals.

3) Comparability. The formation of new models proceeds by comparing existing or newly created models with those newly appearing due to the arrival of signals to the brain.

4) The "functional ring." Simulation proceeds in a definite material substratum—nerve structures. Simulation should be considered the result of the circulation of information in an integral closed system: skin—subcutaneous devices—center—periphery.

5) Entropy. Entropy is a measure of chaos (disorder), and information is a measure of order. The creation of a model in the brain leads to a decrease in entropy. When information enters the brain, order increases and uncertainty decreases.

6) Expectancy probability. The presence of a feedback, a channel through which signals from the periphery flow into the brain, has meaning when it is possible to compare in the brain what was done with what should happen as a result of the action. P. K. Anokhin refers to an "acceptor of action" which should be found in the brain.

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7) Minimization of the negative afferent. An organism selects the strategy of behavior which offers to satisfy vital needs and to make it possible to avoid unfavorable situations and negative emotions.

All these principles should be exploited in modeling psychic functions on electronic computers.

The processing of information in the brain proceeds according to two programs: the intellectual (logical) and the emotional. The formation of the intellectual program in a human being is based on the rules of logic developed in the course of study. The emotional program reflects the organic and social needs of a man, and is a necessary component of a logical process.

A number of attempts at simulating personality have been made. The "Oldos" personality was developed in the west. The model suggested by the authors, which they feel is superior to "Oldos," is based on universally recognized concepts regarding emotions considered as the reactions of systems directed toward the satisfaction of the personal and social needs of an organism and which are determined by the state of temporary linkages.

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The Model and Its Teacher

Figures 1 and 2 show how the personality model will operate. A question arrives at the entrance unit. It is assumed that each question contains not only "meaningful" but also "emotional" information. The information is made up of words, word order, and intonation. At the entrance unit, the question is separated into two parts: words and "emotions." This is necessary for the separate fulfillment of logical and "emotional" programs. Words for answering the entering question are selected from a specially organized memory. The memory unit consists of two parts: associative and address. The associative part contains a list of words for answering the standard assembly of questions. The address portion contains a limited dictionary of the model and indicated mutual associations—linkages between words. The list of words on the basis of which the reaction of the model will be constructed is forwarded to the answer unit. In this model, the operations of forecasting the results are distributed to separate units.

In the answer unit, the structure of the answer is filled with words from the assembly, which fit for the given conditions. The formation includes words used mostly in the personality "lexicon,"

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ACC NR: AP6016845

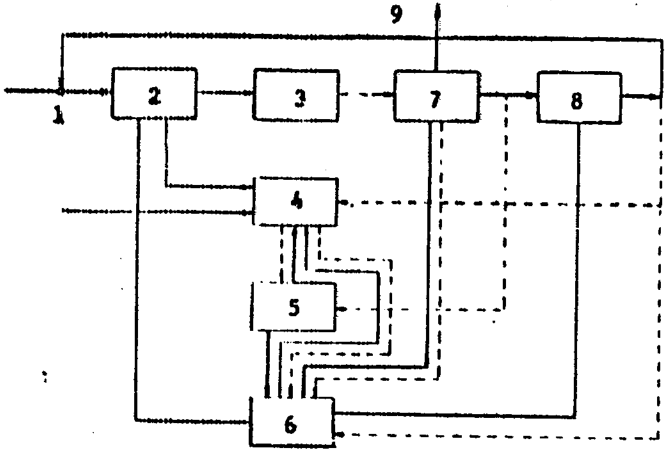
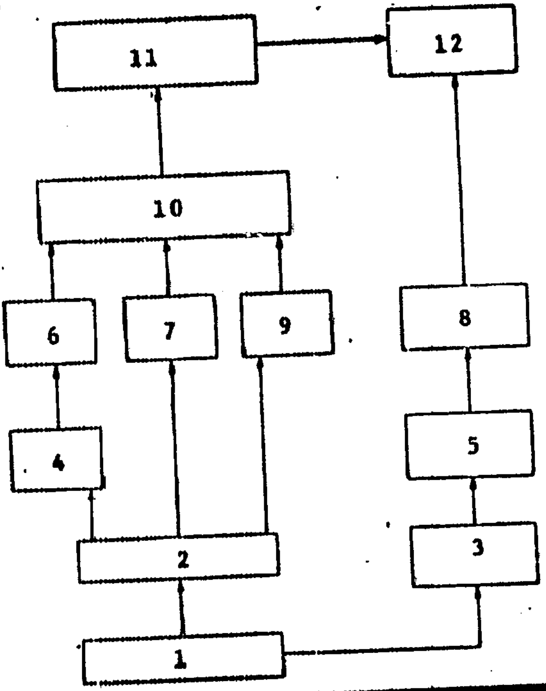


Fig. 1. Diagram of a model answering questions with regard to its own "emotional" state

1 - Question; 2 - entrance unit; 3 - interaction unit; 4 - emotion unit; 5 - short memory unit; 6 - long memory unit; 7 - answer unit; 8 - analysis unit; 9 - answer.

ACC NR: AP6016845



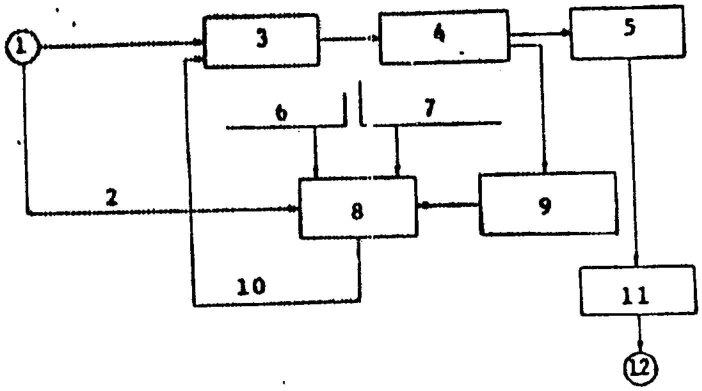


Fig. 2. Diagram for the searching of information and the developing of emotional state

1 - Beginning; 2 - emotional evaluation of question; 3 -
search by emotional indication; 4 - search by identifica-
tion sign; 5 - selection of answer dictionaries; 6 - emo-
tional background; 7 - emotional evaluation of the previ-
ous answer; 8 - emotion unit; 9 - search for emotional in-

dications of sections containing the same question; 10 - corrected emotional evaluation; 11 - determination of the total part; 12 - end.

Fig. 3. Diagram for the construction of the answer to the question presented

1 - Dictionary of the answer; 2 - selection of words; 3 - selection of associative pairs; 4 - calculation of semantic coefficient; 5 - calculation of the weight of the pair; 6 - checking of coefficient value; 7 - calculation of emotional coefficient; 8 - determination of the associative chain; 9 - calculation of frequency coefficient; 10 - calculation of the total coefficient; 11 - filling the construction; 12 - expanding the construction.

words with the most ponderous emotional significance and those which are most closely associated with the content of the answer (Fig. 3). The answer is then expanded by means of associations.

Once an answer has been developed, it must be analyzed. Analysis represents the highest stage of the model. Analysis takes two directions: the emotional and the logical. Following analysis of the substructure, recommendations are developed for execution of the subse-

ACC NR: AP6016845

quent operations: 1) Changing the answer structure through expansion or reduction, and repetition of the entire cycle for the derivation of the answer. 2) Changing the logical conditions of the operation according to the interaction of emotions. 3) Recording the answer in a long-lasting memory.

The above outlined analysis program makes it possible to expose errors in the answer, to change the inner program of the model in the proper direction, to solve the problem of the memorization of freshly formed associative pairs of the answer, etc. At this point the whole cycle of the model's operation ends. [PSB: v. 3, no. 1]

SUB CODE: 06,09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 001

Card 11/11

GOLOVAN', L.I.

Some characteristics of neurodynamics in obsessive neurosis in children. Trudy Inst. vys. nerv. deiat. Ser. patofiziol. 8:96-102 '61. (MIRA 15:2)

(OBSESSIONS) (NERVOUS SYSTEM)

GOLOVAN', L.I.; ROTSHTEYN, G.A., nauchnyy rukovoditel' raboty

Prognostic significance of manifestations of obsession in the course of schizophrenia. Zhur. nevr. i psikh. 65 no.8:1218-1224 '65. (MIRA 18:8)

1. Institut psikhiatrii AMN SSSR, Moskva.

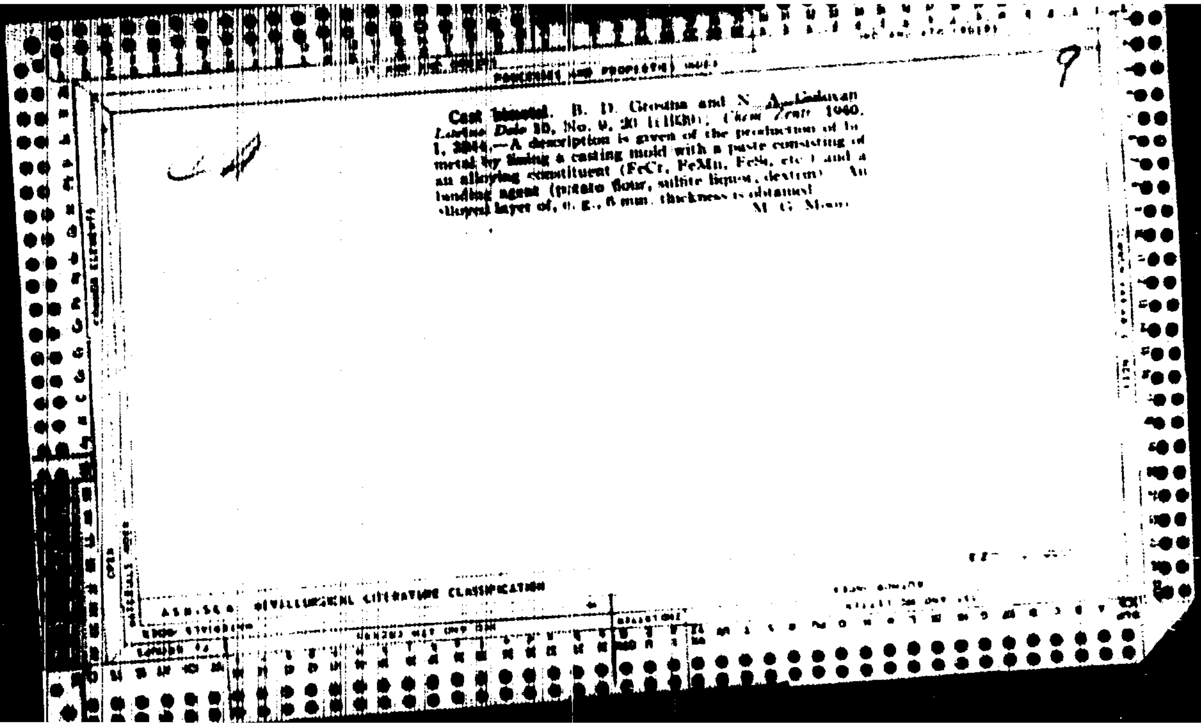
GOLOVAN', L.L.; ZAVIDOVSKAYA, G.I.; SUKAL'SKAYA, I.Yu.

Use of librium in the treatment of schizophrenia with obsessions.
Zhur. nevr. i psikh. 65 no.10:1574-1580 '65. (MIRA 18:10)

1. Institut psikhiatrii AMN SSSR, Moskva.

GOLOVAN', M.Ye., inzhener.

Reinforced semisandal method of fixing shoe bottoms with use of short outsoles. Leg. prom. 17 no.5:50 My '57. (MLRA 10:6)
(Shoe industry)

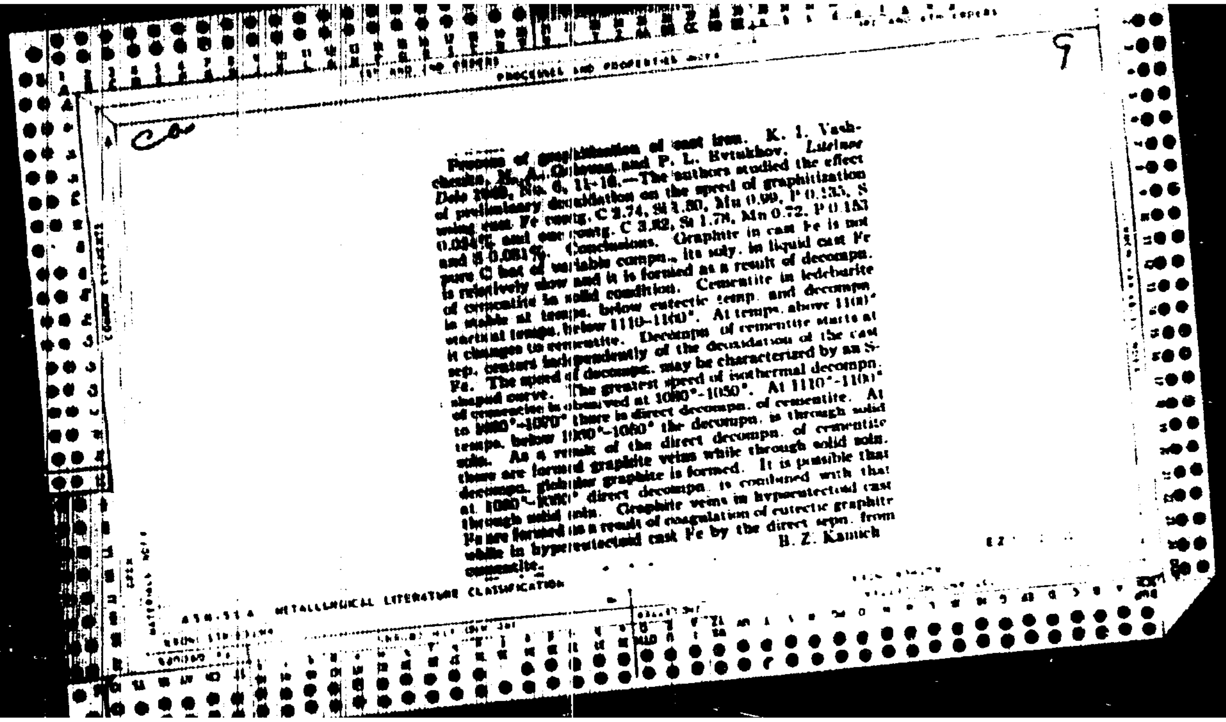


PROCESSES AND PROPERTIES INDEX

9

Cast bimetal. B. D. Grodna and N. A. [illegible]. *Liteinoe Delo* 10, No. 9, 20 (1939); *Chem. Zentr.* 1940, I, 2044.—A description is given of the production of bimetal by lining a casting mold with a paste consisting of an alloying constituent (FeCr, FeMn, FeSi, etc.) and a binding agent (potato flour, sulfite liquor, dextrin). An alloyed layer of, e. g., 6 mm. thickness is obtained.
M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX
9
Ca
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Process of graphitization of cast iron. K. I. Vashchenko, M. A. Gribova, and P. L. Bytukhov. *Liteinoe Delo* 1940, No. 6, 11-16.—The authors studied the effect of preliminary deoxidation on the speed of graphitization using cast Fe contg. C 2.74, Si 1.80, Mn 0.99, P 0.135, S 0.094%, and one contg. C 3.82, Si 1.78, Mn 0.72, P 0.153 and S 0.081%. Conclusions. Graphite in cast Fe is not pure C but of variable compn.; its soly. in liquid cast Fe is relatively slow and it is formed as a result of decompn. of cementite in solid condition. Cementite in ledeburite is stable at temps. below eutectic temp. and decompn. eutectoid temps. below 1110-1100°. At temps. above 1100° it changes to cementite. Decompn. of cementite starts at sep. centers independently of the deoxidation of the cast Fe. The speed of decompn. may be characterized by an S-shaped curve. The greatest speed of isothermal decompn. of cementite is observed at 1080°-1050°. At 1110°-1100° to 1080°-1060° there is direct decompn. of cementite. At temps. below 1080°-1060° the decompn. is through solid soln. As a result of the direct decompn. of cementite there are formed graphite veins while through solid soln. decompn. globular graphite is formed. It is possible that at 1080°-1060° direct decompn. is combined with that through solid soln. Graphite veins in hypoeutectoid cast Fe are formed as a result of coagulation of eutectic graphite while in hypereutectoid cast Fe by the direct sepn. from cementite.

B. Z. Kamich

GOLOVAN, N.A.

Category : USSR/Solid State Physics - Phase Transformation in Solid Bodies E-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3831

Author : Vashchenko, K.I., Golovan', N.A., Todorov, R.P.
Title : Form and Structure of Graphite in Cast Iron Treated with Magnesium

Orig Pub : Liteynoye proiz-vo, 1956, No 3, 19-24

Abstract : The article contains an analysis of the existing ideas concerning the mechanism of formation in the growth of graphite in cast iron treated with magnesium, and also the results of the authors' own investigations. Three possible schemes are described for the growth of graphite segregations in cast iron treated with magnesium. The form and structure of the graphite segregations vary with the conditions of the graphite formation and with the content of magnesium in the cast iron. If the magnesium content is 0.04 -- 0.5%, the graphite segregations have a round form and a sectorial structure. Magnesium is contained in the cast iron mostly in the form of oxides and sulfides.

Card : 1/1

GOLOVAN', N.A.

VASHCHENKO, K.I.; GOLOVAN', N.A.

Composition and structure of decarbonized and transition zones in annealed cast iron. Lit. proizv. no.3:16-20 Mr '58. (MIRA 11:4)

(Cast iron--Metallography)

VASHCHENKO, K.I.; GOLOVAN', N.A.

Effect of silicon on the diffusion of magnesium in cast iron. Lit.
proizv. no.2:27-28 F '60. (MIRA 13:5)
(Diffusion) (Cast iron--Metallography)

GOLOVAN, N.A.

PHASE I BOOK EXPLOITATION SOV/5511

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Metallovedeniye i termicheskaya obrabotka (Physical Metallurgy and Heat Treatment of Metals) Moscow, Mashgiz, 1961. 330 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov UkrSSR. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Editorial Board: M. P. Braun, Doctor of Technical Sciences, I. Ya. Dekhtyar, Doctor of Technical Sciences, D. A. Draygor, Doctor of Technical Sciences, I. S. Kamenichnyye, Engineer, Ye. A. Markovskiy, Candidate of Technical Sciences, V. G. Permyakov, Doctor of Technical Sciences, and A. V. Chernovol, Candidate of Technical Sciences; Ed.: M. S. Soroka; Tech. Ed.: M. S. Gornostaypol'skaya; Chief Ed., Mashgiz (Southern Dept.): V. K. Serdyuk, Engineer.

Card 1/10

PURPOSE: This collection of articles is intended for scientific workers and technical personnel of research institutes, plants, and schools of higher technical education.

COVERAGE: The collection contains papers presented at a convention held in Kiyev on problems of physical metallurgy and methods of the heat treatment of metals applied in the machine industry. Phase transformations in metals and alloys are discussed, and results of investigations conducted to ascertain the effect of heat treatment on the quality of metal are analyzed. The possibility of obtaining metals with given mechanical properties is discussed, as are problems of steel brittleness. The collection includes papers dealing with kinetics of transformation, heat treatment, and properties of cast iron. No personalities are mentioned. Articles are accompanied by references, mostly Soviet.

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Cherepin, V. T., Candidate of Technical Sciences (Kiyev). Tempering of Carbon Steel by Using Electric Heating 75

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Sazonov, B. G., Candidate of Technical Sciences (Sverdlovsk). Investigating the Influence of the Heating Rate and the Initial Structure on the Phase Recrystallization of Steel and Recrystallization of Austenite as Stipulated by the Phase-Hardening Effect 97

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Larikov, L. N., Engineer (Kiyev). Investigating the Effect of Aluminum and Chromium Additions on the Recrystallization Kinetics of α-Iron 114

Sokol, A. N., Candidate of Technical Sciences, O. S. Kostyrko, Engineer, E. I. Mirovskiy, B. B. Vinokur, and M. P. Braun, Doctor of Technical Sciences, Professor (Kiyev). Plasticity of Steels Within the Pressworking Temperature Range 121

Vinokur, B. B., Engineer, E. I. Mirovskiy (Kiyev) and A. L. Geller (Kramatorsk). Effect of the Increase of Forging

Temperature on the Mechanical Properties of Large Forgings 127

Braynin, I. Ye., Doctor of Technical Sciences, Professor (Stalino), V. A. Kharchenko, Engineer and A. I. Kondrashev (Kramatorsk). Experimental Investigation of Stress Distribution in the Cross Section of a Bent Billet as Related to Flaking 132

Baranov, S. M. (Leningrad). Hydrogen as a Surface-Active Admixture in Alloys 138

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Mirovskiy, E. I., Engineer, A. L. Geller (Kramatorsk), B. B. Vinokur, and M. P. Braun (Kiyev). The Effect of the Duration of Heating Before Forging on the Ductility of Steel 152

Gavranek, V. V., Engineer, and D. N. Pol'shutkin (Khar'kov). Mechanism of the Cavitation Erosion of Metals 157

GOLOVAN', N.A., inzh.

Carbide coagulation in martensite crystals. Metalloved. i term. obr. met. no.3:22-24 Mr '61. (MIRA 14:6)

1. Kiyevskiy mototsikletnyy zavod.
(Steel alloys—Metallography)

VASHCHENKO, K.I.; FIRSTOV, A.N.; ZHIZHCHENKO, V.V.; KADUCHENKO, A.G.; GOLOVAN', N.A.

Bimetallic motor cylinders for motorcycles. Lit. proizv. no.8:16-18 Ag '61. (MIRA 14:7)
(Motorcycles) (Laminated metals)

GOLOVAN', N.A.; SHCHERBAN', N.I.

Design and manufacture of metal dies for automatic presses.
Porosh. met. 5 no.4:94-99 '65. (MIRA 18:5)

1. Kiyevskiy mototsikletnyy zavod.

VASHCHENKO, K.I., doktor tekhn.nauk; FIRSTOV, A.N., kand.tekhn.nauk; ZHIZHCHENKO, V.V., kand.tekhn.nauk; DUPLYAK, V.D., inzh.; AVDOKUSHIN, V.P., inzh.; KOSTENKO, [illegible].D., inzh.; GOLOVAN', N.A., inzh.

Die-casting of bimetallic motorcycle cylinders. Mashinostroenie no.4:65-68 Jl-Ag '65. (MIRA 18:8)

GOLOVAN', PAVEL FEDOTOVICH

MAZALOV, Andrey Trifonovich; GOLOVAN', Pavel Fedotovich; GONCHAROV, Pavel Nikolayevich; MASLOV, Aleksey Trofimovich; MAKITO, Eduard Iosifovich; CHEKMAREV, N.M., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Installation of automatic blocking apparatus and electric centralization] Montazh ustroistv avtoblokirovki i elektricheskoi tsentralizatsii. Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 399 p. (MLRA 10:9)
(Railroads--Signaling--Block system)

GOLOVAN' P.F.

MUCHKIN, N.F.; GOLOVAN', P.F.

Wiring diagrams should be prepared by designing organizations.
Avtom., telem. i sviaz' 2 no.2:46 F '58. (MIRA 11:1)

1. Glavnyy tekhnolog tresta "Transsignalstroy" (for Muchkin).
2. Nachal'nik tekhnicheskogo otdela tresta "Transsignalstroy"
(for Golovan').
(Electric circuits--Graphic methods)

GOLOVAN', P. F., inzh.

Continuous method of constructing high-voltage signal lines with automatic blocking. Transpstroi 13 no. 11:13-15 N '63.
(MIRA 17:5)

GOLOTA, Ye.A.; CHEPUROV, K.P.; PRUSS, G.G.; KARYSHEVA, A.F.; GOLOVAN', R.I.

Characteristics of experimental leptospirosis in swine. Veterinariia 41 no.8:29-33 Ag '64. (MIRA 18:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya.

GOLOVAN', T.V., mladshiy nauchnyy sotrudnik

Work in protecting children of preschool age from infestation
with helminths and lamblia. Sov. med. 25 no.4:120-122 Ap '62.
(MIRA 15:6)

1. Iz Rostovskogo nauchno-issledovatel'skogo instituta
meditsinskoy parazitologii (dir. - prof. S.N. Pokrovskiy).
(WORMS, INTESTINAL AND PARASITIC)
(GIARDIASIS)

/

GOLOVAN', V. [Holovan', V.]

Clay roofing tiles made by us. Sil'.bud. 9 no.5:19-20
My '59. (MIRA 13:3)

1. Nachal'nik soveta Polozkoy mezhkolkhoznoy organizatsii
Zaporozhskoy oblasti.
(Zaporozh'ye Province--Tiles, Roofing)

GOLOVAN', V.M. [Holovan', V.M.] (Odessa)

Filtration from a channel of trapezoidal cross section taking the soil capillarity into consideration [in Ukrainian with summaries in Russian and English]. Prykl.mekh. 3 no.4:451-459 '57. (MIRA 11:2)

1.Odeskiy pedagogichniy institut.
(Soil percolation)

GOLOVAN', V.M. [Holovan', V.M.]

Method for determining the Christoffel-Schwarz constants in a problem involving percolation from a channel. Dop. AN URSR no.10:1277-1281 '61. (MIRA 14:11)

1. Odesskiy pedagogicheskiy institut. Predstavleno akademikom AN SSSR A.Yu. Ishlinskim [Ishlins'kyi, O.IU.].
(Soil percolation)

POPOV, S.N.; GOLOVANCHIKOV, A.M.; GONCHAROV, G.I.; LYSENKO, T.P.; ORLOVA, I.A., inzh., red.; VOROB'YEVA, L.V., tekhn.red.

[New transverse profiles of the ballast section] Novye poperechnye profili ballastnoi prizmy. Moskva, Transzheldorizdat, 1963. 31 p. (MIRA 17:1)

GOLOVANCHIKOV, A.M., inzh.

Calculating the vertical stresses in the ballast section. Vest. TSNII MPS 24 no.3:12-15 '65. (MIRA 18:8)

GOLOVANCHIKOV, I.Ya., inzh.

Peat transporation in the White Russian S.S.R. and problems of increasing its efficiency. Torf.prom. 39 no.3:17-21 '62.
(MIRA 15:4)

1. Institut ekonomiki AN BSSR.
(White Russia—Peat—Transportation)

AKSYUCHITS, N.I.; GOLOVANCHIKOV, I.Ya., inzh.; ZHURAVKOV, A.A.

Comparison of the economy characteristics of the various types of fuel in the White Russian S.S.R. Torf. prom. 39 no.5:1-4 '62. (MIRA 16:8)

1. Gosplan BSSR (for Aksyuchits). 2. Institut ekonomiki AN BSSR (for Zhuravkov).

ANOKHIN, S.I.; ANTSUK, D.N.; GUTSEV, Ye.G.; GOLOVANCHIKOV, I.Ya.; NIKITENKO, V.G.; SHELELYAYEV, A.I.; MARTINKEVICH, F.S., red.; PASHKEVICH, O.N., red.; VASIL'YEVSKIY, I., red. izd-va; VOLOKHONOVICH, I., tekhn. red.

[Improving the efficiency of large-csale transports in the White Russian S.S.R.]Ratsionalizatsiia perevozok massovykh gruzov v Belorusskoi SSR. Minsk, 1963. 241 p.
(MIRA 16:7)

1. Akademiya navuk BSSR. Minsk, Instytut ekonomiki.
(White Russia—Freight and freightage)

Golovanchikov, A.M.

NIKOLAYCHUK, K.L., inzh.; SHUPTA, S.S.; BEL'MESOV, O.A., slesar'; ZHEREBTSOV, F.M., master; GOLOVANCHIKOV, A.M., mashinist elektrovoza.

Workers of Barabinsk train shed. Elek. i tepl. tiaga no.11:32-34 N '57. (MIRA 10:11)

1. Barabinsk, elektrovoznoye depo, Omskaya doroga. 2. Korrespondent gazety "Omskiy zheleznodorozhnik" (for Shupta).
(Railroads--Maintenance and repair)

SHARIPOV, A.; GOLOVANENKO, B.; IVANOVA, N.

Obtaining phthalic anhydride by oxidation of petroleum tetralin.
Zhur. prikl. khim. 37 no.12:2768-2771 D '64.
(MIRA 18:3)

GOLOVANENKO, B. I., Cand of Tech [illegible] Sci--- (diss) "Technological Development of a Process for the Joint Extraction of Methyl Ethyl Ketone and Phenol,"

Moscow, 1959, 9 pp (Ministry of Higher Education USSR, Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov) (KL, 6-60, 122)

GoLovaNenko B.I

PHASE I BOOK EXPLOITATION SOV/3663

Akademiya nauk SSSR. Institut khimicheskoy fiziki

Okisleniye uglevodorodov v zhidkoy faze; sbornik statey (Oxidation of Hydrocarbons in the Liquid Phase; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 334 p. Errata slip inserted. 2,500 copies printed.

Ed.: N. M. Emanuel', Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: E. M. [illegible]; Tech. Ed.: I. F. Kuz'min.

PURPOSE: This collection of articles is intended for chemists interested in hydrocarbon oxidation reactions, particularly for those specializing in petroleum fuels.

COVERAGE: This collection of 35 articles represents the results of investigations made over a period of several years on previous [illegible] [illegible]. The authors present their own theoretical and experimental data and also draw from current literature. No personalities are mentioned. References accompany most of the articles.

[illegible], P.G. (Deceased), B.V. [illegible], and B.I. Golovanenko [Scientific Research Institute of Synthetic Alcohols and Organic Products]. Kinetics of the Thermal Decomposition of Certain Alkylaromatic Hydrogen Peroxides [illegible]

The kinetics of the thermal decomposition of the hydroperoxides of isopropylbenzene and of s-butylbenzene, with and without solvents, is investigated at 100-130°C. It is shown that the thermal decomposition reactions of s-butylbenzene and isopropylbenzene hydroperoxides differ greatly.

[illegible], E.V., A.L. Yershenko, and M.A. [illegible] [L'vovskiy gosudarstvennyy universitet imeni Ivana Franko (Lvov State University imeni Ivan Franko)]. Oxidation of Tertiary Hydrocarbons in Emulsions by Molecular Oxygen 232

The rate of hydrogen peroxide accumulation during the oxidation of isopropylbenzene by gaseous oxygen in alkaline emulsions of hydrocarbons was investigated. The presence of emulsifiers increases the rate of oxidation as a result of increased oxygen, hydrocarbon and hydrogen peroxide solubility in the aqueous phase. Solid bentonite emulsifiers were used. Isopropylbenzene is more easily oxidized than 1,1-diphenylethane.

[illegible], M.A. [Moscow State University imeni M.V. Lomonosov]. Oxidation of Aromatic Hydrocarbons by Oxygen 236

The author explains the link between the structure of aromatic and naphthenic hydrocarbons and their stability with respect to oxygen at high temperatures (175-205°)

Yershenko, A.L., K.A. Grigor'yeva, N.V. Arutyunov, and M.K. Vilenchuk [L'vovskiy politekhnicheskiy institut (L'vov Polytechnical Institute)]. Chromatographic Synthesis of Alkylated Hydrogen Peroxides of the 1, 1-Diphenylethane Series 237

Mitskevich, N.I., and I.V. [illegible] [Institut khimii AN BSSR (Institute of Chemistry, Academy of Sciences BSSR)]. Conjugate Decarboxylation in the Autoxidation of Resin Acids 238

The authors have shown that this phenomenon is characteristic of the oxidation process of all resin acids. The results obtained are particularly important for understanding the chemistry of resin acid transformations.

[illegible], V.V. [Moscow State University imeni M.V. Lomonosov]. Kinetics of the Reaction of Organic Peroxides With the Iodine Ion 245

The author concludes from the kinetics of the separation of iodine by a given peroxide that it is possible to determine the peroxide qualitatively and quantitatively and to identify its class.

[illegible], L.K. [Institute of Chemical Physics, Academy of Sciences USSR]. Quantitative Methods of Determining Fatty Acids of Normal Structure 249

The author has used paper chromatography to separate mixtures of hydroxamic acids up to C4 and their derivatives, and the distillation method to separate methyl esters of acids above C5 with a carrier.

[illegible], F.A. [Corresponding Member, Academy of Sciences USSR] [Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniya iskusstvennogo zhidkogo topliva (All-Union Scientific Research Institute of Petroleum and Gas Refining and of Synthetic Liquid Fuel Production)]. Oxidation of Solid Hydrocarbons to Obtain Synthetic Fatty Acids 255

The author discusses the composition of mixtures of synthetic fatty acids, data on neutral oxygen-containing compounds of "secondary nonsaponifiables" of the paraffin oxidation product, and research [illegible] the thermal synthesis [illegible] in nonalkaline media.

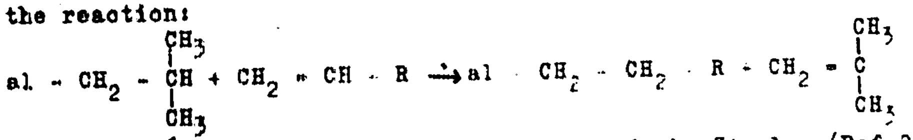
S/063/60/005/005/016/021
A051/A029

AUTHORS: Golovanenko, B.I., Sladkov, A.M., Ivanov, L.L., Kalashnikova, Z.S.
Menyaylo, A.T.

TITLE: The Synthesis of Primary Fatty-Aromatic Alcohols Using Triisobutylaluminum

PERIODICAL: Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D.I. Mendeleyeva, 1960, No. 5, Vol. 5, p. 594

TEXT: The possibility of realkylation of triisobutylaluminum, according to the reaction:



$$\mathrm{al} - CH_2 - \underset{CH_3}{\overset{CH_3}{CH}} + CH_2 = CH - R \rightarrow \mathrm{al} - CH_2 - CH_2 - R + CH_2 = \underset{CH_3}{\overset{CH_3}{C}}$$

where al = $\frac{1}{3}$ Al.., based on a stipulation made by Ziegler (Ref. 2) was investigated by the authors. It is assumed that triisobutylaluminum will be-

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S/063/60/005/005/016/021
A051/A029

The Synthesis of Primary Fatty-Aromatic Alcohols Using Triisobutylaluminium

come an industrial product in the near future due to the comparative simplicity of production of the latter by the direct synthesis from isobutylene, aluminum and hydrogen and also due to its high catalytic activity in combination with titanium halides for the polymerization of unsaturated hydrocarbons (Ref. 3,4). The authors also determined the optimum conditions for the synthesis and the effect of certain additions on the yield of the specific products. Several experiments were carried out in order to determine the effect of finely-dispersed nickel on the realkylation reaction in view of the fact known from Ref. 5 that finely-dispersed nickel brings about the displacement reaction of less active alkyl groups in the form of olefines from the aluminum trialkyls by the more reactive olefines. The experimental procedure was as follows: the mixture of α-olefine and triisobutylaluminum was heated in a circular-bottom flask with a reversible cooler to 120-140°C. The isobutylene formed was collected in the gasometer. The reaction lasted 3-6 hours. After the formation of isobutylene stopped, the obtained product was acidified by air oxygen in the flask with a mixer at 40°C. After the acidification was completed the obtained product was subjected to hydro-

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S/063/60/005/005/016/021
A051/A029

The Synthesis of Primary Fatty-Aromatic Alcohols Using Triisobutylaluminum

lysis with an aqueous solution of NaOH or HCl, then this was dried and distilled. In order to obtain finely-dispersed nickel, in some experiments, prior to the reaction nickel acetylacetonate was added to the mixture in quantities of 150 ml/mole of the olefine previously dissolved in dry octane. The alcohol yields were estimated from the initial triisobutylaluminum. The greatest yield was obtained from α-methylstyrene, somewhat less from vinyltoluene, vinylethylbenzene and styrene. The presence of nickel in the case of α-methylstyrene was found to increase the yield; in the case of styrene the yield dropped. The experimental results showed that there is a practical possibility of synthesizing primary alcohols by the simple method, without using increased pressure and special equipment. There is 1 table and 5 references: 1 Soviet, 3 German, 1 Rumanian.

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S/063/60/005/005/016/021
A051/A029

The Synthesis of Primary Fatty-Aromatic Alcohols Using Triisobutylaluminum

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov (Scientific Research Institute of Synthetic Alcohols and Organic Products)

SUBMITTED: April 29, 1960

Card 4/4

S/063/60/005/005/017/021
A051/A029

AUTHORS: Golovanenko, B.I., Menyaylo, A.T., Savin, V.A.

TITLE: The Synthesis of Higher Olefines Controlled by the Polymerization of Ethylene

PERIODICAL: Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D.I. Mendeleyeva, 1960, No. 5, Vol. 5, pp. 594-595

TEXT: Based on the known fact (Ref. 1) that in the interaction of ethylene and triethylaluminum, in addition to the growth in the chain, the molecule of ethylene displaces the corresponding olefine from the triethylaluminum molecule the authors have attempted to select the proper synthesis conditions, which would turn ethylene into the higher olefines C_4-C_{30} of a normal structure in two stages. The latter could be used in the production of detergents and soaps or in the oxysynthesis process:

$$al - C_2H_5 + n(C_2H_4) \longrightarrow al - (CH_2)_{2n} - C_2H_5$$

$$al - (CH_2)_{2n} - C_2H_5 + C_2H_4 \longrightarrow$$

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$\longrightarrow al - C_2H_5 + CH_2 = CH - (CH_2)_{2n-2} - C_2H_5$, where $al = \frac{1}{3}$ Al. In the second stage the triethylaluminum is regenerated and can be used again. The experimental procedure was as follows: 23 g of triethylaluminum and dry hexane (137 g or 200 ml) were charged into an autoclave with a capacity of one liter. The hexane was saturated with dry ethylene at 20°C and 45 atm after which the contents of the autoclave were heated to 110°C for 6 hours until the pressure reached 15 atm. After the autoclave was cooled the reaction products were lifted out of it (260 g). The obtained higher aluminum alkyls were charged into another autoclave, into which a nickel acetylacetonate solution (100 mg) in dry hexane (100 g) was preliminarily introduced. Ethylene was fed into the autoclave at 20°C until saturation was reached at 25 atm and then this was heated to 110°C. The pressure first rose to 80 atm and then decreased to 60 atm. After this it remained constant for several hours. After the cooling a product was obtained (380 g), in the distillation from which the following olefines were extracted: n-octene (16 g), b.p. 120-123°C, $n^{20}_D = 1.4088$, $d^{20}_4 = 0.7188$; the literature data (Ref. 2) are:

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The Synthesis of Higher Olefines Controlled by the Polymerization of Ethylene

n_D^{20} = 1.4087, d_4^{20} = 0.7149; bromine number: calculated 174, found 170; n-decene (19 g), b.p. 171-174°C; n_D^{20} = 1.4300, d_4^{20} = 0.7433; literature data (Ref 2) n_D^{20} = 1.4215, d_4^{20} = 0.7408; bromine number: calculated 114, found 112; n-dodecene (17 g), b.p. 92-95°C at 15 mm Hg; n_D^{20} = 1.4362, d_4^{20} = 0.7581; literature data (Ref. 2): n_D^{20} = 1.4300; d_4^{20} = 0.7584, bromine number: calculated 95.3, found 94. The residue after the distillation of the dodecene was carefully processed with n-butyl alcohol. 13.0 l of gas containing 92% ethane in the analysis was formed hereby, which corresponds to 18 g of triethylaluminum. In the second stage, therefore, about 80% of the triethylaluminum used in the reaction is regenerated. The authors state that the submitted results indicate that it is possible to obtain higher olefines from ethylene under the following conditions: temperature 110°C, pressure about 60 atm, the amount of nickel acetylacetonate 750 mg to 1 kg of aluminum alkyls. There are 2 references: 1 German, 1 English.

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A051/A029

The Synthesis of Higher Olefines Controlled by the Polymerization of Ethylene

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov (Scientific Research Institute for Synthetic Alcohols and Organic Products)

SUBMITTED: April 29, 1960

Card 4/4

KRUZHALOV, Boris Dmitriyevich[deceased]; GOLOVANENKO, Boris Ivanovich;
Prinimal uchastiye KIVA, V.N.; VINOGRADOV, A.A., red.;
GUREVICH, S.G., red.; PANTELEYEVA, L.A., tekhn. red.

[Joint production of phenol and acetone] Sovmestnoe poluchenie fenola i atsetona. Moskva, Goskhimizdat, 1963. 199 p.
(MIRA 16:12)

(Phenols) (Acetone)

GOLOVANENKO, B.I.; SHARIPOV, A.Kh.

Vapor phase oxidation of dimethylnaphthalenes to phthalic anhydride. Zhur. VKHO 8 no.5:581 '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv.

GOLOVANENKO, B.I.; SHARIPOV, A.Kh.; IVANOVA, N.V.

Production of phthalic anhydride by oxidation of the extract of a low-viscosity oil distillate. Khim. i tekh. topl. i masel 8 no.10:9-13 O '63. (MIRA 16:11)

GOLOVANENKO, B.I.; SHARIPOV, A.Kh.; IOFFE, I.I.; MUKHTARULLINA, F.G.

Obtaining phthalic anhydride by conjugated vapor-phase oxidation of hydrocarbons on vanadium catalysts. Neftekhimia 4 no.4:591-592 Jl-Ag '64. (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv, Ufa.

SHARIPOV, A.Kh.; GOLOVANENKO, B.I.; IOFFE, I.I.; BORSHCHENKO, V.P.;
FATKULLINA, N.S.

Obtaining phthalic anhydride by oxidizing a petroleum naphthaline fraction. Neftepер. i neftekhim. no.8:22-23 '64. (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov, Leningrad, i Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv, Ufa.

[illegible] SOURCE CODE: UR/0286/65/000/019/0070/0070

AUTHORS: [illegible]; [illegible], A. G.; Simonov, V. A.

38
B

ORG: none

TITLE: [illegible] Class 39, No. 175228 [announced by [illegible] (Nauchno-issledovatel'skiy [illegible]

SOURCE: [illegible] no. 19, 1965, 70

TOPIC TAGS: [illegible] methylstyrene, decalin peroxide, copolymer

ABSTRACT: [illegible] for obtaining synthetic rubber by [illegible] in an aqueous emulsion [illegible] buffers, regulators, stabilizers [illegible] peroxide initiators, decalin [illegible] is used in the form of oxidation [illegible] decalin peroxide.

SUB CODE: 07/ SUBM DATE: 3Aug64

UDC: 678.762.2-134.622

MENTAYLO, A.P.; GOLOVANENKO, B.I.; GOLUBEV, V.K.; YAKOVLEVA, A.K.

Production of higher aluminum organic compounds from ethylene and triethylaluminum. Khim.prom. 41 no.4:13-14 Ap '65.

(MIRA 18:8)

MENYAYLO, A.T.; GOLOVANENKO, B.I.; GOLUBEV, V.K.; YAKOVLEVA, A.K.

Production of primary higher fatty alcohols from ethylene.
Khim. prom. 41 no.5:323-325 My '65. (MIRA 18:6)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov i Novokuybyshevskiy filial Nauchno-issledovatel'skogo instituta sinteticheskikh spirtov i organicheskikh produktov.

L 19372-65 EWT(m)/EWP(j) RM
ACCESSION NR: AP5001461 UR/0318/64/000/008/0022/0023

16
B

AUTHOR: [illegible], A. Kh.; [illegible], B. I.; Ioffe, I. I.; Borshchenko, V. F.; [illegible]

TITLE: Preparation of phthalic anhydride by oxidation of the naphthalene fraction of crude oils

SOURCE: Neftepererabotka i neftekhimiya, no. 8, 1964, 22-23

TOPIC TAGS: crude petroleum, naphthalene, oxidation

ABSTRACT: Noting that in the USA the amount of crude-oil naphthalene is almost as large as that produced from coke, the authors describe their studies of the vapor-phase catalytic oxidation of the crude-oil naphthalene fraction yielding phthalic anhydride. They show that, relative to the naphthalene content, the phthalic-anhydride yield may reach 94% of the theoretical. However, this is achieved at the cost of a catalyst-productivity decrease of 15-20%. Orig. art. has: 2 tables.

ASSOCIATION: VNIIneftekhim, Leningrad; NIIneftekhim, Ufa

SUBMITTED: 00 ENCL: 00 SUB CODE: FP, OC
NO REF SOV: 002 OTHER: 002 JPRS

Card 1/1

PREOBRAZHENSKAYA, Ye.A.; GOLOVANENKO, G.N.; MOSHKIN, P.A.

Synthesis based on levulinic acid. Gidroliz. i lesokhim prom. 12
no.7:14-16 '59 (MIRA 13:3)
(Levulinic acid)

GOLOVANENKO, I. M.

BCS

1230. [illegible] in the [illegible] of the [illegible] mining district.—I. M. Golovanenko and P. M. Krimskov (Ogneupory, 16, 333, 1951). (3 pp., 4 tables.)

GoloVAnenKo, I.M.

AUTHOR: Golovanenko, I.M., Zamyatin, A.A., Pokrovskiy, D.I. 131-10-5/6

TITLE: The Raw Material Basis of the Industry of Refractories in the USSR (Syr'yevaya baza ogneupornoy promyshlennosti SSSR)

PERIODICAL: Ogneupory, 1957, Nr 10, pp. 464-472 (USSR)

ABSTRACT: The volume of the production of refractories in 1957 surpasses that of the time before the revolution by the 10-fold, and the USSR at present range second among the nations of the world with respect to this kind of production. In the time before 1917 refractory clay was mainly found in the Donez basin and in the districts of Voronezh and Novgorod, while magnesite was found in the neighborhood of the town of Satki, district of Chelyabinsk. The production of raw material at that time was insignificant and manual labor predominated as may be seen from fig. 1. In the years 1941-1945 the mechanization of raw material production attained 40%, and after the war it rose to 97,5%-99,9%, as is shown by a small table, a fact which was mainly due to the introduction of rotatable dredges with caterpillar wheels (see fig. 2). For loading on to railroad trucks bunker stacks were built (fig. 3) and rotatable excavators were used (fig. 4). For loading the clay on to the transport cars of the suspension railway special machines were introduced (fig. 5). In connection

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131-10-5/6

The Raw Material Basis of the Industry of Refractories in the USSR

with planing caterpillars the rotatable dredges are used also for the work of making new deposits accessible (fig.6). The costs for 1 m^3 of this kind of work are shown in table 1 for different kinds of working systems, and so is the distribution of the various working systems in tables 2 and 3. Table 4 shows the increase of raw material production in the individual 5-years' plans. In the course of recent years building of fireclay-burning plants on sites where clay and kaolin was found was started in order to rationalize production and to reduce transport costs (fig. 7). In recent years a considerable number of new occurrences of refractory clays have been discovered. Table 5 shows the various places and the amount of their yield in 1956. Table 6 contains the production costs of raw materials and of the work of disclosing new deposits. There are 7 tables and 7 figures.

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Card 2/2

BEREZHNOY, Ivan Nikolayevich; ZAYCHENKO, Grigoriy Evlampiyevich; GOLOVANENKO,
I.M., red.; SHUSTOVA, V.M., red. izd-va; KARASEV, A.I., tekhn. red.

[Open-pit mining of deposits of refractory clays and kaolins]
Razrabotka mestorozhdenii ogneupornykh glin i kaolinov otkrytym
sposobom. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i
tsvetnoi metallurgii, 1958. 162 p. (MIRA 11:8)
(Clays) (Strip mining)

131-1-14/14

AUTHOR: Golovanenko, I. M. , Reviewer

TITLE: On the Mechanization of the Mining Works in the Chasov-Yar Quarries (O mekhanizatsii gornykh rabot na Chasov-Yarskikh kar'yerakh)

PERIODICAL: Ogneupory, 1958, Nr 1, pp. 48 - 48 (USSR)

ABSTRACT: This article was published by P. M. Ktitorov, I. N. Berezhnyy, and G. Ye. Zaychenko in the periodical Gornyy zhurnal, 1957, Nr 10, pp. 25 - 31, and is discussed here. The section "haulage works" describes the advantages of the driven-in conveyor belts which operate in connection with rotor dredges and unloading assembly--lines (Conveyor ?) and possess a higher efficiency than all other haulage equipments of raw materials. K. A. Myshkin suggested a construction of lower track-supporting rollers for conveyor lines which is of advantage for the centering of the line and besides cleans it of adhering material. The section "uncovering works" describes the construction of a new efficient aggregate consisting of a movable rotor dredge and a broaching device which is for the first time used in the USSR. It was designed and constructed by laborers of the Chasov- Yarskiy mining administration. Various

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131-1-14/14

On the Mechanization of the Mining Works in the Chasov-Yar Quarries

working possibilities of this aggregate are described in the article. By this mechanization it was made possible to reduce the manufacturing expenses of fireproof clay in the year 1956 by 12,5 % and thus to attain the lowest manufacturing expenses per 1 t of clay among all mines. It is recommended to all mining directors to utilize these experience in their enterprises. There is 1 Slavic reference.

AVAILABLE: Library of Congress

1. **Mines-Mechanization**

USCOMM-DC-54742

Card 2/2

AUTHOR: **Golovanenko, I. M., Abstracter** SOV/131-58-8-10/12

TITLE: **Caterpillar** Excavators of Low and Medium Production Capacity (Gusenichnyye rotornyye ekskavatory maloy i sredney proizvoditel'nosti)

PERIODICAL: Ogneupory, 1958, Nr 8, pp 382-382 (USSR)

ABSTRACT: In "Express-Informationen" of October 1957 it is said that a German firm produced a series of small rotor excavators with a capacity of 80 - 300 m^3 per hour. An abstract of this report is given containing, above all, the technical data of these excavators. There is 1 figure

Card 1/1

RYBNIKOV,V.A.[deceased]; VEYKHER,A.A.; GOLOVANENKO,I.M., nauch.red.; FEDOROVA, L.N., red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirements as to the quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., perer. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. No.40.[Magnesite] Magnezit. Nauchn. red. I.M.Golovanenko. 1961. 38 p. (MIRA 14:10)

1. Moscow. Vsesoyuznyy naucyno-issledovatel'skiy institut mineral'nogo syr'ya.

(Magnesite)

GOLOVANENKO, I.M.

Refractory material mining enterprises in 1959-1961. Ogneupory 27 no.8:368-372 '62. (MIRA 15:9)

1. Gosudarstvennyy nauchno-ekonomicheskiy sovet Soveta Ministrov SSSR.

(Refractory materials)
(Mines and mineral resources)